JOURNAL OF CHROMATOGRAPHY VOL. 35 (1968)

SUBJECT INDEX

Acids, fatty, see Fatty acids
——, organic, automatic determination of 158
Actinides, separation from lanthanides by ion exchange chromatography using hydroxyethylenediaminetriacetic acid 549
Actinomycetales, identification of 9,10-methylene-hexadecanoic acid in . . 211
Adenine nucleotides, a method for the separation of cyclic adenosine 3′,5′-monophosphate from other adenine nucleotides by high voltage ionophoresis on paper 136
Adenosine 3′,5′-monophosphate, cyclic, a method for the separation from other adenine nucleotides by high voltage ionophoresis on paper . . . 136
Alcohols, polyhydric, separation and quantitative analysis in tobacco products 94
Aldehydes, aliphatic, thin-layer chromatography of 3-methyl-2-benzothiazolone hydrazone derivatives of . . . 111
——, fatty, see Fatty aldehydes
——, thin layer chromatography of . . . 108
Alginic acid, a new thin layer material . 396
——, thin-layer chromatography of metal ions on. 396, 405
Alkaloids, in biological specimens from horses, isolation, detection and identification 234
——, *Mitragyna* oxindole, quantitative determination after separation by thin-layer chromatography 72
Alkenyl acyl and diacyl ethanolamine phosphatides, fractionation of a natural mixture by argentation adsorption thin-layer chromatography 113
Amino acids, nitro-2-pyridyl derivatives, detection and quantitative microdetermination by thin-layer chromatography on precoated sheets. . 47
——, thin-layer chromatographic separation of *cis-trans* isomers of trisglycinatocobalt(III) 126
Amino sugars and their alcohols, separation on an amino acid analyser . . 106
Ammonium compounds, quaternary, associated with the oxidation of choline, chromatographic methods for isolation and identification. . . 497
Anthraquinone glycosides, separation from dianthrone glycosides on columns of Sephadex LH-20 562
Antimicrobial substances, bioautography on thin-layer chromatograms of . . 295
Apparatus, application of the Nano-Jector to the gas chromatography of solid samples 92
Aromatic compounds, interpretation of gas chromatographic data obtained on Carbowax 400 309
Azo dyes, detection and determination of the number of hydroxy groups by means of acetylation and ΔR_{Mr} values 362
Bergamot oil, preparative chromatographic isolation of trace components in 475
Bioautography of antimicrobial substances on thin-layer chromatograms 295
Butane, vapour-phase nitration product analysis by on-line multiple column gas chromatography 10
Carbohydrates, separation from the bark of *Populus tremula* by gel filtration 99
——, separation of glucosamine and galactosamine and their glycitols on an amino acid analyser. 106
——, see also Sugars
Cardiac glycosides, separation of digitoxin and digoxin from their 20,22-dihydro-derivatives by thin-layer chromatography on cellulose layers 122
Catecholamines, detection on chromatograms by heating with paraformaldehyde 389
Chlorinated pesticides, relative migration data (R_{TDE}) determined by thin-layer chromatography 119
Chlorogenic acid, quantitative determination in plant tissue by combined polyvinylpyrrolidone column and gas chromatography 329
Cholesterol, ^{14}C-labelled, quantitation together with ^{14}C-labelled long-chain fatty acids by paper chromatography. 129
Choline oxidation products, chromatographic isolation and identification 497
Chromatographic curves, correlation analysis of seven procedures for determining areas of. 469
Cobalt complexes, ion pair formation studied by paper electrophoresis. . 201
Cocoa powder, examination by two-

dimensional thin-layer chromatography of sugars in 117
Coenzymes, chromatographic separation of biologically important phosphate esters 37
Column chromatography, improved flow rate with Sephadex superfine G-200 565
Compound S, fluorometric quantitative routine thin-layer chromatographic determination in plasma 526
Corticosterone, fluorometric quantitative routine thin-layer chromatographic determination in plasma 526
Cortisol, fluorometric quantitative routine thin-layer chromatographic determination in plasma 526
Cortisone, fluorometric quantitative routine thin-layer chromatographic determination in plasma 526
Cycloaliphatic epoxides, paper chromatography of 83
Deoxyribonucleic acid alkylation products, estimation of 292
Dermatophytes, pigment patterns on thin-layer chromatograms 573
Dianthrone glycosides, separation from anthraquinone glycosides on columns of Sephadex LH-20 562
Digitoxin, separation from its 20,22-dihydro-derivative by thin-layer chromatography on cellulose layers 122
Digoxin, separation from its 20,22-dihydro-derivative by thin-layer chromatography on cellulose layers 122
o-Dihydroxybenzenes, selective detection on cellulose thin-layer plates . . . 567
DNA, see Deoxyribonucleic acid
Dyes, detection and determination of the number of hydroxy groups in disperse azo dyes by means of acetylation and ΔR_{Mr} values 362
Electrofocusing techniques, artefacts arising from the use of sucrose solutions 575
Elution time in paper and thin-layer chromatography, conditions for minimum values 269
Enzymes, column chromatography of papaya proteinases on hydroxylapatite. 283
——, glycolytic, lattice entrapment of. . 103
Epoxides, cycloaliphatic, paper chromatography of 83
Erythrocyte porphyrins, determination as their methyl esters 248
Ethyl paraoxon, separation by gas chromatography, the effect of the column support material 17
Ethyl parathion, separation by gas chromatography, the effect of the column support material 17
Fatty acids, long-chain, ^{14}C-labelled, quantitation together with ^{14}C-labelled cholesterol by paper chromatography. 129
——, from phosphatide plasmalogens, two-dimensional reaction thin-layer chromatography of 66
Fatty aldehydes from phosphatide plasmalogens, two-dimensional reaction thin-layer chromatography of. . . 66
Flavins, chromatographic studies of the products of photolysis of 376
Fluorocarbons of low molecular weight, gas chromatographic separation of 217
Galactolipid components of broad bean leaves, separation and estimation . 223
Galactosamine, separation from glucosamine on an amino acid analyser . 106
Gas chromatography, application of the Nano-Jector to solid samples . . . 92
——, application to the microdetermination of the poorly resolved component. 318
——, correlational analysis of seven procedures for determining areas of chromatographic curves 469
——, dependence of the HETP on the column length 1
——, interpretation of data 309
——, modified porous glasses as supports in 489
——, vapour-phase butane nitration product analysis by on-line multiple column gas chromatography . . . 10
Glucosamine, separation from galactosamine on an amino acid analyser . 106
Glucosides, phenolic, separation from the bark of *Populus tremula* by gel filtration 99
Glyceryl nitrates, identification and assay of the ^{14}C labelled compounds. . . 506
Glycitols of glucosamine and galactosamine, separation on an amino acid analyser 106
Glycolytic enzymes, lattice entrapment of 103
Haemin, thin-layer chromatographic separation from porphyrins and lipids 248
Harderian gland lipid, thin-layer chromatographic characterization . . . 179
Heparin and N-desulphated heparin, gel filtration behaviour of 101
Histidine-loading test, separation of imidazoles in 445
Histones, arginine-rich, isolation by recycling chromatography 168
Humectants, polyhydric alcohols, separation and quantitative analysis in tobacco products 94
Hydrocarbons, chromatographic study of solutions in acetonitrile 24
——, interpretation of gas chromatographic data obtained on Carbowax 400 309
——, vapour-phase butane nitration product analysis by on-line multiple column gas chromatography . . . 10

Imidazoles, separation in the histidine-loading test. 445
Indoleamines, detection on chromatograms by heating with paraformaldehyde. 389
Inorganic halides, separation of $NbOCl_3$ from $NbCl_5$ in a gas chromatograph by temperature programming. . . 577
Inorganic ions, separation of lanthanides and actinides on ion exchangers . . 549
——, thin-layer chromatography of metal ions on alginic acid 396, 405
——, thin-layer chromatography using a liquid anion exchanger. 416
Inorganic long-chain polyphosphates, fractionation on Sephadex G100. . 207
Inorganic thin layer chromatography, some aspects of the use of a liquid anion exchanger. 416
Insecticides, see Pesticides
Iodine-125, quantitative scanning on thin-layer chromatograms 436
Iodine compounds, organic, an improved chromatography on Tris-maleate buffer treated paper 434
Iodoamino acids, combined chemical and isotopic detection in thin-layer chromatography. 441
Ion pair formation, paper electrophoretic study of 201
17-Ketosteroids, separation by means of horizontal thin-layer chromatography. 430
Lanthanides, separation from actinides by ion exchange chromatography using hydroxyethylenediaminetriacetic acid 549
Latex, detection and estimation by thin-layer chromatography of pentachlorophenol in 43
Lipid classes, quantitative analysis via thin-layer chromatography employing charring and densitometry 519
Lipids, gel filtration of native and modified pig serum lipoproteins 230
—— of the Harderian gland, thin-layer chromatographic characterization 179
——, quantitative analysis of rat liver phospholipids by a two-step thin-layer chromatographic procedure . 297
——, separation and estimation of the galactolipid components of broad bean leaves. 223
——, thin-layer chromatographic separation from porphyrins and haemin . 248
Lipoproteins from pig serum, gel filtration of 230
Malaoxon, separation by gas chromatography, the effect of the column support material 17
Malathion, separation by gas chromatography, the effect of the column support material 17
Mass transfer term, mechanism in paper chromatography 257
Melatonin, decomposition in a solution in ethanol 572
Metal complexes, paper electrophoretic study of ion pair formation. . . . 201
Metal ions, thin-layer chromatography on alginic acid. 405
Metal halides, separation of $NbOCl_3$ from $NbCl_5$ in a gas chromatograph by temperature programming 577
3-Methyl-2-benzothiazolone hydrazone derivatives of aliphatic aldehydes, determination by thin-layer chromatography 111
9,10-Methylenehexadecanoic acid, identification in aerobic "*Actinomycetales*" 211
Methyl parathion, separation by gas chromatography, the effect of the column support material 17
Mitragyna oxindole alkaloids, quantitative determination after separation by thin-layer chromatography. . . 72
Mucins, submaxillary, acrylamide gel electrophoresis of 134
Nano-Jector, application to the gas chromatography of solid samples . . . 92
Niobium halides, separation of $NbOCl_3$ from $NbCl_5$ in a gas chromatograph by temperature programming. . . 577
Nitro blue tetrazolium chloride, electrophoresis and thin layer gel filtration of 301
Nitro-2-pyridyl amino acids, detection and quantitative micro-determination by thin-layer chromatography on precoated sheets 47
Nucleic acids, paper and thin-layer chromatography of 538
Nucleic acid bases, estimation of the products of DNA alkylation . . . 292
——, resolution from complex mixtures with nucleosides and nucleotides. 531
Nucleosides, resolution from complex mixtures with nucleotides and nucleic acid bases 531
Nucleotides, chromatographic separation of biologically important phosphate esters 37
——, a method for the separation of cyclic adenosine 3′,5′-monophosphate from other adenine nucleotides by high voltage ionophoresis on paper 136
——, resolution from complex mixtures with nucleosides and nucleic acid bases 531
Organic acids, automatic determination of 158
Organophosphorus pesticides, the effect of the column support material on the chromatographic resolution of methyl parathion, ethyl parathion, ethyl paraoxon, malathion, and malaoxon 17
——, quantitative paper chromato-

graphic analysis of VÚAgT-3 . . . 277
Oxindole alkaloids of *Mitragyna*, quantitative determination after separation by thin-layer chromatography 72
Papaya proteinases, column chromatography on hydroxylapatite 283
Paper chromatography, the influence of the type of paper in the chromatography of proteins and nucleic acids 538
——, peak broadening in 257, 269
Paraffin wax, determination of ultraviolet absorbers by thin-layer chromatography. 370
Pentachlorophenol, detection and estimation in natural latex by thin-layer chromatography 43
Pentose phosphate cycle intermediates and related compounds, detection and identification 352
Pesticides, chlorinated, relative migration data (R_{TDE}) determined by thin-layer chromatography 119
——, the effect of the column support material on the gas chromatographic resolution of methyl parathion, ethyl parathion, ethyl paraoxon, malathion, and malaoxon . . 17
——, organophosphorus, quantitative determination of VÚAgT-3 277
Phenolic compounds, selective detection on cellulose thin-layer plates . . . 567
Phenolic glucosides, separation from the bark of *Populus tremula* by gel filtration. 99
Phosphates, detection and identification of intermediates of the pentose phosphate cycle and related compounds. 352
Phosphate esters, biologically important, chromatographic separation of . . 37
Phosphatides, fractionation by argentation adsorption thin-layer chromatography of a natural mixture of alkenyl acyl and diacyl ethanolamine phosphatides 113
——, plasmalogens, two-dimensional reaction thin-layer chromatography in the analysis of 66
Phospholipids of rat liver, quantitative analysis by a two-step thin-layer chromatographic procedure. . . . 297
Pigment patterns of dermatophytes on thin-layer chromatograms 573
Plasmalogens, phosphatide, two-dimensional reaction thin-layer chromatography in the analysis of. 66
Polyhydric alcohol humectants, separation and quantitative analysis in tobacco products 94
Polyphosphates, inorganic long-chain, fractionation on Sephadex G100 . 207
Polystyrene, microdetermination in explosive mixtures by pyrolytic gas chromatography 323
Populus tremula, separation by gel filtration of phenolic glucosides and carbohydrates from the bark . . . 99
Porphyrins from erythrocytes, thin-layer chromatographic separation from haemin and lipids 248
Pregnanes, paper chromatographic evaluation of the contribution to polarity of hydroxyl and other groups at the C-17, C-20 and C-21 positions of the side chain. 287
Proteinases from *Carica papaya*, column chromatography on hydroxylapatite. 283
Proteins, gel filtration of native and modified pig serum lipoproteins . . 230
——, micro-electrophoretic determination in the 10^{-9} to 10^{-7} g range . . 336
——, paper and thin-layer chromatography of 538
——, the use of recycling chromatography on Sephadex for the isolation of arginine-rich histones . . . 168
Protein synthesis, micro-electrophoretic determination in the 10^{-9} to 10^{-7} g range 336
Quaternary ammonium compounds associated with the oxidation of choline, chromatographic methods for isolation and identification . . 497
Rare earth mixtures, ternary, displacement ion-exchange separation with chelating eluants 423
Riboflavin, chromatographic studies of the products of photolysis of . . . 376
Rubber, detection and estimation of pentachlorophenol in natural latex by thin-layer chromatography . . . 43
—— vulcanizates, quantitative determination of free elemental sulphur in 513
Sclareol, chromic acid oxidation of . . . 192
Scopoletin, a thin-layer chromatography–fluorometry method for quantitative analysis in tobacco 570
Scopolin, a thin-layer chromatography–fluorometry method for quantitative analysis in tobacco 570
Selenocyanate, chromatographic separation from thiocyanate 213
Steroids, a direct, fluorometric quantitative routine thin-layer chromatographic method for the determination of free cortisol, cortisone, corticosterone and compound S in plasma. 526
——, paper chromatographic evaluation of the contribution to polarity of hydroxyl and other groups at the C-17, C-20 and C-21 positions of the pregnane side chain 287
——, separation of the cardiac glycosides digitoxin and digoxin from their 20,22-dihydro-derivatives by thin-layer chromatography on cellulose

layers 122
——, separation of some 17-ketosteroids by means of horizontal thin-layer chromatography 430
——, simultaneous quantitation of ^{14}C-labelled cholesterol and individual long-chain fatty acids by paper chromatography 129
——, thin-layer chromatography of sterols related to vitamin D 53
Sterols related to vitamin D, thin-layer chromatography of 53
Sugars, chromatographic separation of biologically important phosphate esters 37
—— in cocoa powder, examination by two-dimensional thin-layer chromatography 117
——, see also Carbohydrates
Sulphur, free, determination in rubber vulcanizates by thin-layer chromatography 513
Supports in gas chromatography, the use of modified porous glasses 489
Thin-layer chromatography, conditions for minimum separation time in . . 269
Thiocyanate, chromatographic separation from selenocyanate 213
Tobacco products, separation and quantitative analysis of polyhydric alcohol humectants in 94
——, a thin-layer chromatography–fluorometry method for quantitative analysis of scopolin and scopoletin in 570
Trace components in natural products, preparative chromatographic isolation and concentration using 4-in. diameter colums 475
Trisglycinatocobalt(III), thin-layer chromatographic separation of the *cis-trans* isomers of 126
Ultraviolet absorbers in paraffin wax, determination by thin-layer chromatography 370
Vitamin D and related sterols, thin-layer chromatography 53
VÚAgT-3, quantitative paper chromatographic analysis of the organophosphorus pesticide. 277
Weckamines in biological specimens from horses, isolation, detection and identification 234

TABLE 60

PC R_F VALUES OF METAL IONS
(J. SHERMA, Lafayette College, Easton, Pa. 18042, unpublished data)

Papers: SA-2 = Amberlite sulfonic acid cation-exchange paper, H^+ form.
SB-2 = Amberlite quaternary ammonium anion-exchange paper, Cl^- form.
MN-A = Machery-Nagel sulfonic acid cation-exchange paper, H^+ form.
MN-B = Machery-Nagel quaternary ammonium anion-exchange paper, Cl^- form.
W-1 = Whatman No. 1 cellulose paper.

Solvents: S_1 = 90% acetone + 10% 6 *N* HCl.
S_2 = 90% methanol + 10% 6 *N* HCl.
S_3 = 90% acetic acid + 10% 6 *N* HCl.
S_4 = 90% acetic acid + 10% 12 *N* HCl.

Technique: Ascending.

Initial zones: 5 μl of 0.050 *M* test solutions. Bismuth was 0.050 *M* chloride dissolved in 1:5 HCl; vanadium was a saturated solution of V_2O_5 in 0.10 *M* H_2SO_4; the rest were 0.050 *M* nitrates dissolved in water.

Detection: Spray with yellow ammonium sulfide followed by dilute HCl.

Metal	*R_F in S_1*				
	SA-2	*SB-2*	*MN-A*	*MN-B*	*W-1*
Bi(III)	0.33[a]	0.00	0.72	0.40	0.88
Cd(II)	0.70	0.00	0.61	0.39	0.69
Co(II)	0.55	0.00	0.48	0.37	0.41
Cu(II)	0.55	0.00	0.52	0.38	0.45
Fe(III)	0.88	0.43	0.89	0.86	0.92
Ni(II)	0.00	0.00	0.00	0.00	0.00
Pb(II)	0.27[a]	0.00	0.52[a]	0.38	0.20[c]
V(V)	0.045	0.29[a]	0.049[b] 0.53	0.63[a]	0.69[a]
H^+ front	0.68	0.47	0.52	0.37	0.46

	R_F in S_2				
	SA-2	*SB-2*	*MN-A*	*MN-B*	*W-1*
Bi(III)	0.16[a]	0.00	0.80	0.00	0.80
Cd(II)	0.49[c]	0.00	0.83	0.35	0.86
Co(II)	0.033	1.0[a]	0.65	0.77	0.83
Cu(II)	0.20	0.00	0.67	0.35	0.76
Fe(III)	0.23	0.00	0.82	0.77	0.87
Ni(II)	0.026	0.90	0.62	0.77	0.82
Pb(II)	0.026	0.00	0.36[a]	0.00	0.34[a]
V(V)	0.11	0.00[b] 0.70	0.75	0.64	0.77

	R_F in S_3		*R_F in S_4*	
	SA-2	*MN-A*	*SA-2*	*MN-A*
Bi(III)	0.033	0.055	0.00	0.047
Cd(II)	0.21[c]	0.16	0.25	0.20
Co(II)	0.18[a]	0.12	0.25[a]	0.13
Cu(II)	0.15[c]	0.15	0.13	0.13
Fe(III)	0.36[c]	0.71	0.46[c]	0.73
Ni(II)	0.046	0.079	0.17	0.10
Pb(II)	0.00	0.00	0.00	0.00
V(V)	0.053	0.055	0.12	0.13

[a] Comet from origin to this R_F value. [b] Double zone. [c] Diffuse zone.

TABLE 61

PC R_F VALUES (RELATIVE) OF METHYLATED PENTOSES
(M. ALAM AND R. J. MCILROY, *J. Chem. Soc., C* (1967) 1579)

Paper: Whatman Nos. 1 and 3.
Solvents: S_1 = *n*-Butanol–ethanol–water (4:1:5).
S_2 = *n*-Butanol–water (azeotropic mixture).
Detection: Not specified.

Compound	R_F*	
	S_1	S_2
2,3,4-Tri-O-methyl-D-xylose	0.94	0.80
2,3,5-Tri-O-methyl-L-arabinose	0.95	0.82
2,3-Di-O-methyl-D-xylose	0.73	0.58
2-O-methyl-D-xylose	0.38	0.20
Oligosaccharides	0.04	

* Relative to that of 2,3,4,6-tetra-O-methyl-D-glucose.

TABLE 62

PC R_F VALUES AND HIGH-VOLTAGE PAPER ELECTROPHORESIS OF HOMOCYSTINE AND SOME RELATED COMPOUNDS
(S. P. BESSMAN, Z. H. KOPPANYI AND R. A. WAPNIR, *Anal. Biochem.*, 18 (1967) 215)

Paper chromatography
Paper: Whatman No. 3 MM.
Solvents: S_2 = *n*-Butanol–acetic acid–water (6:2:2).
S_2 = Isopropanol–formic acid–water (30:2:15).
S_3 = Acetone–0.5% aqueous urea (6:4).
S_4 = Methanol–pyridine–water (80:4:20).
Detection: Cadmium–ninhydrin reagent.

Paper electrophoresis
Paper: Whatman No. 3 MM.
Buffer: 97% formic acid, 2.5%; glacial acetic acid, 8.7%; pH 1.85.
Voltage: 2,000 V per 58.5 cm strip.
Time: 60 min.

Compound	R_F				*Electrophoretic migration**
	S_1	S_2	S_3	S_4	
Homocystine	0.19	0.44	0.39	0.31	0.80
Cystine	0.04	0.34	0.30	0.20	0.64
Homocystine thiolactone	0.57	0.71	0.85	0.81	1.36
Cystathionine	0.10	0.24	0.46	0.19	0.79
Homocysteic acid	0.14	0.45	0.27	0.46	—0.10**
Cysteic acid	0.04	0.46	0.71	0.39	—0.23**

* Relative to alanine = 1.00.
** Migrates toward the anode.

TABLE 63

TLC R_F VALUES OF N-2,4-DINITRO-5-AMINOPHENYL (DNAP) DERIVATIVES OF AMINO ACIDS
(R. S. RATNEY, M. F. GODSHALK, J. JOICE AND K. W. JAMES, *Anal. Biochem.*, 19 (1967) 362)

Thin layer: Silica Gel G.
Solvents: S_1 = Chloroform–*n*-propanol–acetic acid (70:30:1).
S_2 = Chloroform–*tert.*-amyl alcohol–acetic acid (50:50:3).
S_3 = Benzene–pyridine–acetic acid (60:13:27).
Detection: Nitrogen dioxide and then β-naphthol.

DNAP of	R_F		
	S_1	S_2	S_3
Alanine	0.33	0.58	0.64
β-Alanine	0.57	0.73	0.67
Arginine	0.00	0.00	0.12
Aspartic acid	0.02	0.09	0.53
Glutamic acid	0.09	0.39	0.40
Glycine	0.17	0.36	0.49
Histidine (N-α-DNAP)	0.00	0.00	0.10
Isoleucine	0.70	0.87	0.86
Leucine	0.65	0.84	0.83
Methionine	0.47	0.69	0.74
Norleucine	0.67	0.86	0.84
Norvaline	0.59	0.82	0.92
Phenylalanine	0.50	0.76	0.88
Proline	0.38	0.60	0.83
Serine	0.04	0.12	0.39
Threonine	0.09	0.20	0.37
Tryptophan	0.46	0.69	0.52
Tyrosine	0.29	0.36	0.75
O-Mono-DNAP-tyrosine	0.00	0.00	0.15
Valine	0.60	0.84	0.92
OH (3-Amino-4,6-dinitrophenol)	0.80	0.92	1.00
NH_2(4,6-Dinitro-*m*-phenylenediamine)	streaks	streaks	0.86

TABLE 64

PC R_F VALUES OF SOME ALIPHATIC MONO-GLYCIDYL ETHERS
(J. NOVÁK, *Collection Czech. Chem. Commun.*, 32 (1967) 3798)

Paper: Whatman No. 3.
Technique: Ascending.
Impregnation: I_1 = 40 % solution of petroleum in petrol ether.
I_2 = 30 % ethanolic solution of formamide.
I_3 = 25 % ethanolic solution of formamide.
Solvents: S_1 = Methanol–*n*-butanol–water (16:1:4).
S_2 = Cyclohexane–chloroform (1:1).
S_3 = Heptane–cyclohexane (3:1).
Detection: Treatment with quinoline for 10 min at 110–125°. The procedure is carried out between two glass plates and layers of paper wool, quinoline being soaked into the paper wool, and under infrared lamps.

Compound R in R-O-CH_2-CH(O)-CH_2	R_F		
	I_1S_1	I_2S_2	I_3S_3
C_6H_{13}–	0.58	—	—
C_8H_{17}–	0.36	—	—
$C_{10}H_{21}$–	0.19	—	—
$C_{16}H_{33}$–	0.03	—	—
HO–CH_2–CH_2–	—	0.17	—
CH_3–CH(OH)–CH_2– respectively HO–CH_2–CH(CH_3)–	—	0.37 0.43	—
CH_3–CH(OH)–CH_2–CH_2– respectively HO–CH_2–CH_2–CH(CH_3)–	—	0.50 0.57	—
HO–$(CH_2)_4$–	—	0.57	—
CH_3–O–$(CH_2)_2$–	—	—	0.19
C_2H_5–O–$(CH_2)_2$–	—	—	0.38
C_4H_9–O–$(CH_2)_2$–	—	—	0.80

TABLE 65

TLC R_F VALUES OF CYCLIC DICARBOXYLIC ANHYDRIDES AFTER CONVERSION TO *p*-ANISIDIDES
(E. KNAPPE AND I. ROHDEWALD, *Z. Anal. Chem.*, 232 (1967) 341)

Preparation of derivatives: 100 mg of the investigated anhydride dissolved in 10 ml acetone are refluxed with 5 ml of a 1 % solution of *p*-anisidine in acetone for 30 min. The excess of *p*-anisidine is removed by means of a strong acid cation exchanger.

Thin layer: MN-Kieselgel N-HR.
Solvent: Benzene–tetrahydrofuran–propionic acid (80:30:5).
Detection: 1 part of *p*-dimethylaminobenzaldehyde in 100 parts of ethanol and 5 parts of hydrochloric acid.

p-Anisidide of	R_F
Pyromellitic anhydride	0.14
Citraconic anhydride	0.23
Maleic anhydride	0.26
Succinic anhydride	0.37
Trimellitic anhydride	0.47
Endomethylenetetrahydrophthalic anhydride	0.52
Phthalic anhydride	0.58
Tetrahydrophthalic anhydride	0.61
Hexahydrophthalic anhydride	0.65
Methylendomethylenetetrahydrophthalic anhydride	0.74
Tetrachlorophthalic anhydride	0.83
Hexachloroendomethylenetetrahydrophthalic anhydride	0.90

TABLE 66

TLC R_F VALUES OF SOME NITROCHLOROBENZENES
(K. OBRUBA AND F. NAVRÁTIL, *Chem. Průmysl*, 17 (1967) 157)

Thin layer: Aluminium oxide, activity III, 60–100 DIN (Spolana, Neratovice), loose layer.
Solvents: S_1 = Hexane–acetone (7:1).
S_2 = Hexane–acetone (10:1).
S_3 = Hexane–acetone (15:1).
S_4 = Hexane–acetone (30:1).
S_5 = Hexane.
S_6 = Cyclohexane–acetone (7:2).
S_7 = Cyclohexane–acetone (7:1).
Detection: D_1 = U.V. light.
D_2 = Reduction by spraying with stannous chloride solution and then detection with Ehrlich's reagent.
D_3 = Sodium hydroxide in aqueous ethanol.
D_4 = Sodium hydroxide in acetone.

Compound	R_F						
	S_1	S_2	S_3	S_4	S_5	S_6	S_7
2-Nitrochlorobenzene	0.90	0.86	0.80	0.76	0.55	0.83	0.79
4-Nitrochlorobenzene	0.96	0.94	0.92	0.88	0.65	0.82	0.87
2,4-Dinitrochlorobenzene	0.80	0.67	0.55	0.43	0.19	0.72	0.63
2,6-Dinitrochlorobenzene	0.56	0.41	0.33	0.19	0.13	0.59	0.41
2,4,6-Trinitrochlorobenzene	0.67	0.51	0.36	0.22	0.06	0.66	0.47

TABLE 67

PC R_F VALUES OF DIAMINOBENZENE DERIVATIVES
(I. GEMZOVÁ AND J. GASPARIČ, *Collection Czech. Chem. Commun.*, 32 (1967) 2742)

Paper: Whatman No. 3.
Impregnation: 20% formamide in ethanol.
Solvents: S_1 = Heptane, in atmosphere of ammonia.
S_2 = Heptane–benzene (1:1), in atmosphere of ammonia.
S_3 = Benzene, in atmosphere of ammonia.
S_4 = Chloroform, in atmosphere of ammonia.
S_5 = Chloroform–ethyl acetate (1:1), in atmosphere of ammonia.
Detection: Ehrlich's reagent and observation in daylight and U.V. light.

Compound	R_F					*Colour*	*Fluorescence*
	S_1	S_2	S_3	S_4	S_5		
2-Methyl-1,4-diaminobenzene	0.01	0.04	0.16	0.53	—	orange	orange
2-Methyl-1,3-diaminobenzene	0.03	0.10	0.33	0.66	—	yellow	faint yellow-green
2-Methyl-1,5-diaminobenzene	0.02	0.08	0.32	0.62	—	yellow	yellow-green
4-Methyl-1,2-diaminobenzene	0.04	0.17	0.38	0.67	—	yellow	orange
2-Methoxy-1,4-diaminobenzene	0.01	0.04	0.14	0.53	—	red	red
2-Methoxy-1,5-diaminobenzene	0.01	0.06	0.18	0.55	—	orange	red
4-Methoxy-1,2-diaminobenzene	0	0.07	0.20	0.52	—	orange	red
2-Methyl-5-methoxy-1,4-diaminobenzene	0	0.15	0.36	0.76	—	orange	orange
2-Cyano-1,4-diaminobenzene	0	0.03	0.11	0.28	0.40	orange	gold

4-Cyano-1,2-diaminobenzene	0	0	0.10	0.23	0.45	orange	yellow
2-Ethoxy-1,5-diaminobenzene	0.01	0.09	0.33	0.71	—	gold	orange
2-Chloro-1,4-diaminobenzene	0.01	0.09	0.34	0.54	—	orange-red	red-orange
4-Chloro-1,2-diaminobenzene	0.02	0.16	0.43	0.55	—	faint yellow	violet
2,6-Dichloro-1,4-diaminobenzene	0.08	0.40	0.66	0.78	—	gold	orange
2-Chloro-4-aminophenol	0	0.04	0.08	0.16	0.33	yellow	yellow-green
2-Amino-4-methylphenol	0	0.02	0.11	0.35	—	yellow	yellow-green
1,2,4-Triaminobenzene	0	0	0	0.02	0.10	brown	—
2,3,5-Triaminochlorobenzene	0	0	0	0.13	0.22	violet-red	green
2,3,5-Triaminobromobenzene	0	0.05	0.10	0.17	0.24	brown	—
N-Benzoyl-1,4-diaminobenzene	0	0	0.17	0.65	—	yellow	yellow
8-Aminoquinoline	0.42	0.67	0.86	0.92	—	yellow-orange	—
N,N-Dimethyl-1,4-diaminobenzene	0.10	0.27	0.58	0.88	—	yellow-orange	—
N,N-Diethyl-1,4-diaminobenzene	0.39	0.71	0.87	0.95	—	yellow	—
N-Methyl-N-hydroxyethyl-1,4-diaminobenzene	0	0.03	0.09	0.47	—	yellow	gold
N-Ethyl-N-hydroxyethyl-1,4-diaminobenzene	0	0.06	0.26	0.65	—	yellow	—
N-Ethyl-N-methoxyethyl-1,4-diaminobenzene	0.28	0.65	0.85	0.91	—	yellow	—
2-Methyl-N,N-bis-hydroxyethyl-1,4-diaminobenzene	0	0.01	0.02	0.22	—	yellow	—
N,N-Bis-hydroxyethyl-1,4-diaminobenzene	0	0	0.01	0.08	—	yellow	—
N-Hydroxyethyl-N-cyanoethyl-1,4-diaminobenzene	0	0	0.05	0.39	—	orange	—
2-Chloro-N,N-bis-hydroxyethyl-1,4-diaminobenzene	0	0	0.05	0.21	—	orange	—
2-Methyl-N-butyl-N-hydroxyethyl-1,4-diaminobenzene	0.12	0.47	0.74	0.93	—	yellow	—
2-Methoxy-5-acetamino-N-hydroxyethyl-N-cyanoethyl-1,4-diaminobenzene	0.01	0.03	0.32	0.41	—	faint orange	—
2-Ethoxy-5-acetamino-N,N-bis-acetoxyethyl-1,4-diaminobenzene	0	0.66	0.89	0.90	—	orange	—

TABLE 68

TLC R_F VALUES OF SOME NEUTRAL DRUGS
(P. E. HAYWOOD, M. W. HORNER AND H. J. RYLANCE, *Analyst*, 92 (1967) 712)

Thin layer: Kieselgel GF 254 (Merck) activated for 1 h at 110°.
Solvents: S_1 = Ethyl acetate.
S_2 = Dioxan–methylene chloride–water (1:2:1—organic phase).
S_3 = Chloroform–acetone (9:1).
Detection: D_1 = U.V. light (Hanovia Chromatolite 254 nm).
D_2 = The chromatograms are exposed for a few sec to chlorine gas, left in air for about 15 min and sprayed with 2% starch solution containing 1% of potassium iodide.

Compound	R_F			*Limit of detection in μg*	
	S_1	S_2	S_3	D_1	D_2
Amidopyrine	0.25	0.68	0.26	0.5	0.5
Bemegride	0.63	0.93	0.40	10	0.5
Benzocaine	0.70	0.94	0.54	0.5	0.5
Bromvaletone	0.62	0.79	0.26	10	0.5
Caffeine	0.16	0.56	0.19	0.5	0.5
Carbromal	0.68	0.89	0.47	10	0.5
Ethylbutyrylurea	0.56	0.73	0.23	above 100	0.5
Ethylcrotonylurea	0.53	0.73	0.23	3	0.5
Glutethimide	0.68	0.96	0.55	10	0.5
Mephenesin	0.48	0.63	0.16	3	3
Mephenesin carbamate	0.50	0.58	0.10	15	15
Meprobamate	0.48	0.51	0.06	above 100	0.5
Methylpentynol carbamate	0.66	0.88	0.40	above 100	0.5
Methyprylone	0.40	0.72	0.27	above 100	0.5
Pentylene tetrazole	0.23	0.55	0.13	above 100	100
Phenurone	0.53	0.64	0.15	5	0.5
Sedormid	0.63	0.81	0.27	100	0.5
Sedulon	0.31	0.67	0.23	above 100	0.5
Styramate	0.50	0.52	0.08	15	15
Urea	0.02	0.02	0.03	above 100	0.5

TABLE 69

PC R_F VALUES OF SOME 2,2-BIS(4-HYDROXYPHENYL)PROPANE DERIVATIVES
(I. WIESNER, *Collection Czech. Chem. Commun.*, 32 (1967) 449)

Paper: Whatman No. 3.
Impregnation: I_1 = 25% methanolic solution of formamide.
I_2 = 15–20% methanolic solution of dimethylformamide.
Solvents: S_1 = Heptane–chloroform (1:1.2).
S_2 = Heptane.
S_3 = Chloroform.
S_4 = Cyclohexane–benzene (5:1).
Detection: Treatment with pyridine or quinoline for 15–20 min at 115°. The procedure is carried out between two glass plates and layers of paper wool, pyridine or quinoline being soaked into the paper wool, and under infrared lamps.

Compound	R_F			
	I_1S_1	I_1S_2	I_1S_3	I_2S_4
2,2-Bis[4-(2,3-epoxypropyloxy)phenyl]propane	—	—	—	0.44
2-[4-(3-Chloro-2-hydroxypropyloxy)phenyl]-2-[4-(2,3-epoxypropyloxy)phenyl]propane	—	—	—	0.18
2-[4-(2,3-Epoxypropyloxy)phenyl]-2-(2-hydroxyphenyl)propane	1.00	0.26	1.00	—
2-[4-(2,3-Epoxypropyloxy)phenyl]-2-(4-hydroxyphenyl)propane	0.78	0.06	1.00	—
2-[4-(3-Chloro-2-hydroxypropyloxy)phenyl]-2-(2-hydroxyphenyl)propane	0.85	0.09	1.00	—
2-[4-(3-Chloro-2-hydroxypropyloxy)phenyl]-2-(4-hydroxyphenyl)propane	0.31	0	1.00	—
2-(4-Hydroxyphenyl)-2-(2-hydroxyphenyl)propane	0.34	0	0.86	—
2-[4-(2,3-Hydroxypropyloxy)phenyl]-2-(2-hydroxyphenyl)propane	0.19	0	0.61	—
2-[4-(2,3-Hydroxypropyloxy)phenyl]-2-(4-hydroxyphenyl)propane	0.03	0	0.18	—
2,2-Bis(4-hydroxyphenyl)propane	0.04	0	0.37	—

TABLE 70

PC R_F VALUES OF SOME 2,3-EPOXYPROPANE DERIVATIVES
(I. WIESNER, *Collection Czech. Chem. Commun.*, 32 (1967) 4220)

Paper: Whatman No. 3.
Impregnation: 30% solution of 2,2′-oxydiethanol monobutyl ether–dimethylformamide (1:2).
Solvent: *n*-Heptane.
Detection: D_1 = Potassium iodoplatinate.
D_2 = Potassium iodoferrate.

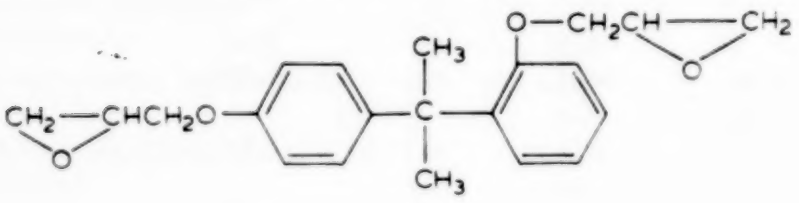
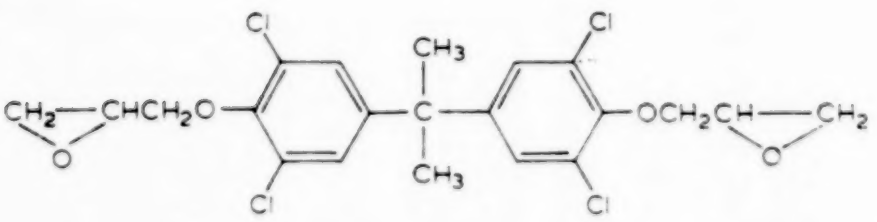
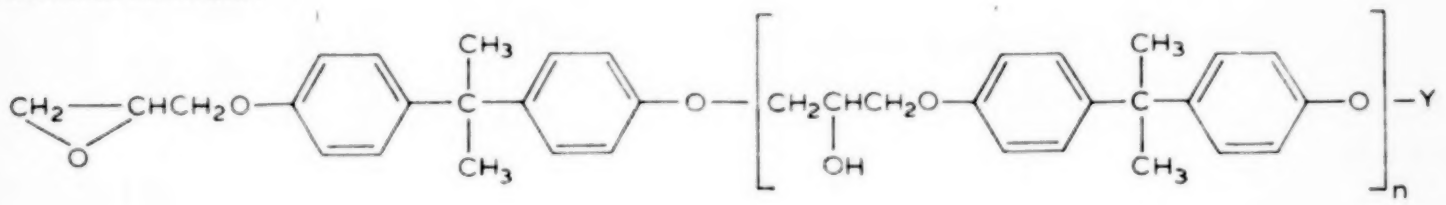
Compound	R_F
1-Phenoxy-2,3-epoxypropane	0.43
1-(4-Methylphenoxy)-2,3-epoxypropane	0.49
1-(3-Methylphenoxy)-2,3-epoxypropane	0.49
1-(2-Methylphenoxy)-2,3-epoxypropane	0.58
1-(4-Ethylphenoxy)-2,3-epoxypropane	0.54
1-(4-Isopropylphenoxy)-2,3-epoxypropane	0.59
1-(4-Isopropenylphenoxy)-2,3-epoxypropane	0.67
1-(4-*tert.*-Butylphenoxy)-2,3-epoxypropane	0.65
1-(4-*tert.*-Octylphenoxy)-2,3-epoxypropane	0.81
1-(4-*tert.*-Nonylphenoxy)-2,3-epoxypropane	0.85
1-(2,4-Dimethylphenoxy)-2,3-epoxypropane	0.63
1-(3,4-Dimethylphenoxy)-2,3-epoxypropane	0.60
1-(2-Methoxyphenoxy)-2,3-epoxypropane	0.16
1-[4-(4-Isopropylphenyl)-phenoxy]-2,3-epoxypropane	0.49
2,2,4-Trimethyl-4-[4-(2,3-epoxypropyloxyphenyl)]-chromane	0.47
	0.25
	0.29

TABLE 71

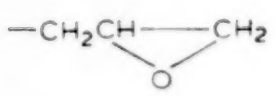
PC R_F VALUES OF SOME MER HOMOLOGUES OF LOW-MOLECULAR EPOXY RESINS
(I. WIESNER, *Collection Czech. Chem. Commun.*, 32 (1967) 4220)

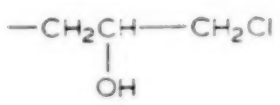
Paper: Whatman No. 3.
Impregnation: 30% solution of 1,8-octanediol–dimethyl sulfoxide (1:2) in methanol.
Solvent: Cyclohexane–dioxane (2:1); 1000 ml of this mixture were saturated with 2 ml water.
Detection: D_1 = Potassium iodoplatinate.
D_2 = Potassium iodoferrate.

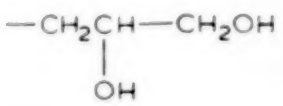
General formula:



Y represents:

(a) 

(b) 

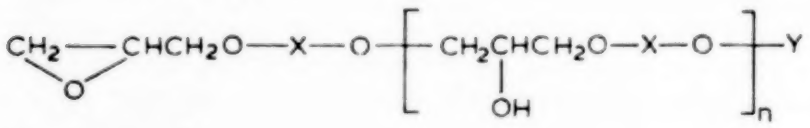
(c) 

Compound	*n*	R_F
Ia	0	0.91
Ib	0	0.51
Ic	0	0.15
Ia	1	0.56
Ia	2	0.33
Ia	3	0.19
Ia	4	0.10
Ib	1	0.08

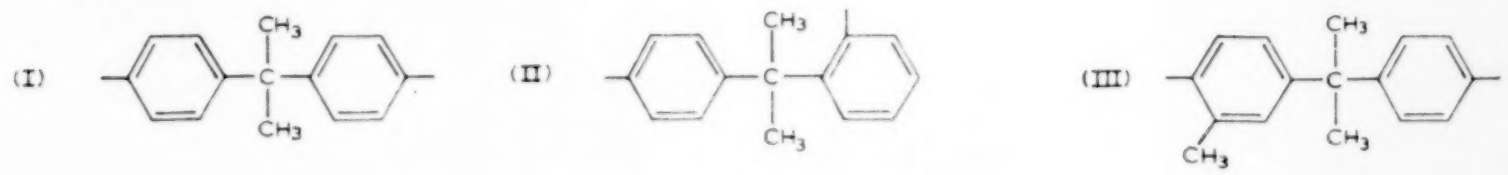
TABLE 72

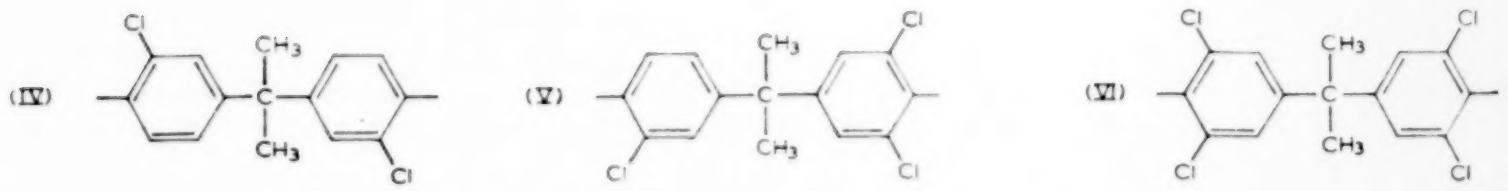
PC R_F VALUES OF COMPOUNDS CONTAINED IN THE LOW-MOLECULAR EPOXY RESINS
(I. WIESNER, *Collection Czech. Chem. Commun.*, 32 (1967) 4219)

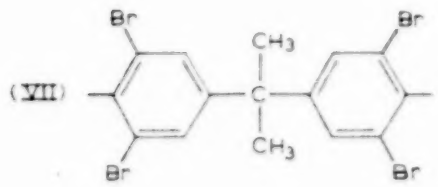
Paper: Whatman No. 3.
Impregnation: 30% solution of 1,8-octanediol–dimethyl sulfoxide (1:2) in methanol.
Solvent: Cyclohexane–dioxane (4:1); 1000 ml of the mobile phase were saturated with 2 ml water.
Detection: D_1 = Potassium iodoplatinate.
D_2 = Potassium iodoferrate.
General formula:



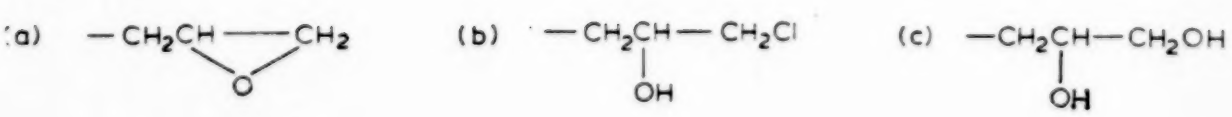
X represents:







Y represents:



Compound	*n*	R_F
IIIa	0	0.88
IIa	0	0.80
Ia	0	0.62
IIIb	0	0.53
IIb	0	0.41
Ib	0	0.24
IIIc	0	0.20
IIc	0	0.14
Ic	0	0.04
Ia	1	0.23
Ia	2	0.07
Ia	3	0.02
VIa	0	0.94
Va	0	0.77
VIb	0	0.51
Vb	0	0.36
VIc	0	0.10
VIIa	0	1
IVa	0	0.63

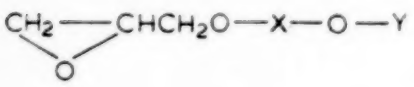
TABLE 73

PC R_F VALUES OF COMPOUNDS CONTAINED IN LOW-MOLECULAR EPOXY RESINS BASED ON DIHYDROXYBENZENES

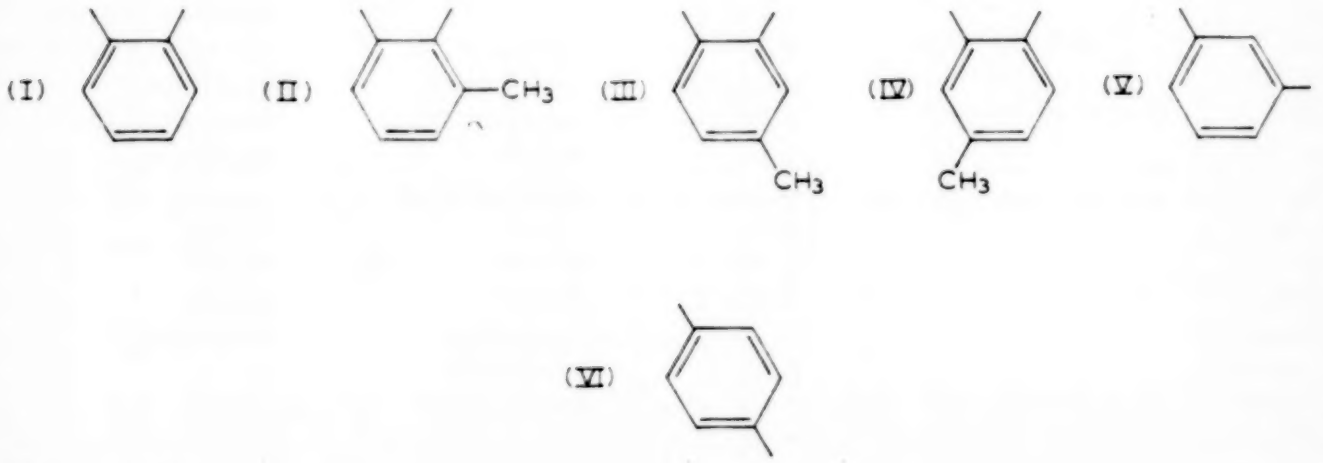
(I. WIESNER, *Collection Czech. Chem. Commun.*, 32 (1967) 4222)

Paper: Whatman No. 3.
Impregnation: 30 % solution of 1,8-octanediol–dimethyl sulfoxide (1:2) in methanol.
Solvent: Cyclohexane–dioxane (4:1); 1000 ml of this mixture were saturated with 2 ml of water.
Detection: D_1 = Potassium iodoplatinate.
D_2 = Potassium iodoferrate.

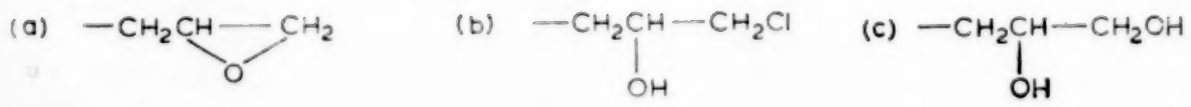
General formula:



X represents:



Y represents:



Compound	R_F
Ia	0.29
Ib	0.12
IIa	0.64
IIIa	0.38
IIIb	0.16
IVa	0.51
IVb	0.19
IIb	0.23
Va	0.27
Vb	0.10
VIa	0.28
VIb	0.10

TABLE 74

TLC R_F VALUES OF AMINOANTHRAQUINONES

(K. OBRUBA, J. ŠLOSAR AND J. ARIENT, *Mikrochim. Acta*, (1966) 262).

Thin layer: Aluminium oxide (Reanal), without binder, loose layer.
Solvent: Hexane–acetone (3:1).
Detection: D_1 = The spots are coloured.
D_2 = Ehrlich's reagent.

Anthraquinone derivative	R_F	*Colour*	
		D_1	D_2[a]
1-Amino-	0.61	brick red	+
2-Amino-	0.38	orange-yellow	+
1,2-Diamino-	0.40	violet-blue	violet-blue
1,3-Diamino-	0.22	red	orange-brown
1,4-Diamino-	0.26	violet	grey-green
1,5-Diamino-	0.46	red	brown-carmine
1,8-Diamino-	0.42	carmine	carmine-brown
1,6-Diamino-	0.22	orange-red	red-brown
1,7-Diamino-	0.14	orange-yellow	orange-brown
2,3-Diamino-	0.12	brown	dark brown
2,7-Diamino-	0.11	ochre-yellow	orange-yellow
1,2,3-Triamino-	0.23	violet	violet
2,6-Diamino-	0.10	brown	brown
1,2,4-Triamino-	0.20	violet	green
1,4,5,8-Tetraamino-	0.19	dark blue	dark blue
2-Methyl-1-amino-	0.69	brick-red	+
2-Methyl-4-amino-	0.63	brick-red	+
2-Methyl-5(8)-amino-	0.61	brick-red	+
2-Methyl-3-amino-	0.44	orange-yellow	+
2-Methyl-6(7)-amino-	0.41	orange-yellow	+
2-Methyl-1,3-diamino-	0.29	red	orange-brown
2-Methyl-1,4-diamino-	0.38	violet	grey-green
2-Methyl-1,5-diamino-	0.51	red	carmine-red
2-Methyl-1,8-diamino-	0.46	carmine-red	brown-carmine
2-Methyl-1,6-diamino-	0.28	orange-red	brown
2-Methyl-1,7-diamino-	0.18	orange-yellow	brown
2-Methyl-3,6(7)-diamino-	0.08	ochre-yellow	light brown
2-Methyl-1,4,5(8)-triamino-	0.22	violet	grey-green
4-Methyl-1-amino-	0.66	brick-red	+
4-Methyl-2-amino-	0.38	orange-yellow	+
4-Methyl-1,3-diamino-	0.21	red	red
4-Methyl-1,5-diamino-	0.53	red	brown
4-Methyl-1,8-diamino-	0.47	carmine-red	carmine-brown
4-Methyl-1,6-diamino-	0.29	orange-red	brown-carmine
4-Methyl-1,7-diamino-	0.17	orange-yellow	light brown
4-Methyl-1,5,8-triamino-	0.23	violet	violet
1,3-Dimethyl-2,4-diamino-	0.32	red	orange-red
1-Amino-4-benzoylamino-	0.49	violet	violet
2-Methyl-1-amino-4-benzoylamino-	0.57	violet	violet
2-Ethyl-1-amino-4-benzoylamino-	0.62	violet	violet
1-Amino-4-chloro-	0.56	brick-red	+
1-Amino-5-chloro-	0.58	brick-red	+
1-Amino-8-chloro-	0.64	brick-red	+
1-Acetamino-4-chloro-	0.72	yellow	yellow
2-Amino-3-chloro-	0.55	yellow	yellow
1-Amino-2-bromo-	0.85	orange-red	orange-red
1-Amino-3-bromo-	0.74	red	+
1-Amino-4-bromo-	0.62	red	+

(*continued on p. D 67*)

TABLE 74 (*continued*)

Anthraquinone derivative	R_F	*Colour*	
		D_1	D_2[a]
2-Methyl-1-amino-3-chloro-	0.77	brick-red	+
2-Methyl-1-amino-3-bromo-	0.79	brick-red	+
2-Amino-3-bromo-	0.55	orange-yellow	+
2-Methyl-1-amino-4-bromo-	0.68	brick-red	+
1,4-Diamino-2-bromo-	0.59	violet	grey-green
2-Amino-1,3-dibromo-	0.71	orange-yellow	+
1-Amino-2,4-dibromo-	0.82	brick-red	+
1-Amino-2-chloro-4-bromo-	0.82	brick-red	+
2-Methoxy-1-amino-	0.63	brick-red	+
2-Methoxy-3-amino-	0.47	ochre-yellow	orange-yellow
1-Methylamino-	0.86	carmine-violet	carmine-violet
1-Hydroxy-2,4-diamino-	< 0.05	violet	grey-green
1-(*p*-Tosylamino)-3-bromo-	0.70	yellow	yellow
1-Anilino-	0.90	carmine-violet	carmine-violet
1-(*p*-Nitroanilino)-	0.75	light pink	light pink
1-(*o*-Chloroanilino)-	0.88	carmine-violet	carmine-violet

[a] + Indicates that after spraying with Ehrlich's reagent the original colour of the spots becomes deeper.

TABLE 75

PC R_F VALUES OF SOME SULPHODERIVATIVES OF 3-HYDROXY-2-NAPHTHOIC ACID
(J. MAREK AND J. MARKOVÁ, *Collection Czech. Chem. Commun.*, 32 (1967) 3554)

Paper: Whatman No. 4.
Solvent: *n*-Propanol–ammonia (2:1).
Detection: D_1 = U.V. light.
D_2 = Diazotized *p*-nitroaniline.

Compound	R_F	D_1	D_2
3-Hydroxy-2-naphthoic acid	0.86	green	violet-red
4-Iodo-3-hydroxy-2-naphthoic acid	0.89	olive-green	violet-red
7-Sulpho-3-hydroxy-2-naphthoic acid	0.50	green	red
4-Iodo-7-sulpho-3-hydroxy-2-naphthoic acid	0.63	olive-green	red
5-Sulpho-3-hydroxy-2-naphthoic acid	0.48	yellow-green	orange

TABLE 76

PC R_F VALUES AND ELECTROPHORETIC MOBILITIES OF SOME 1,5,5-TRISUBSTITUTED BARBITURIC ACIDS

(M. SPRINZL, J. FARKAŠ AND F. ŠORM, *Collection Czech. Chem. Commun.*, 32 (1967) 4285)

Paper chromatography

Paper: Whatman No. 1.

Solvents: S_1 = *n*-Butanol–conc. ammonia–water (4:1:2).
S_2 = Isobutanol saturated with water.
S_3 = *n*-Butanol–acetic acid–water (4:1:5).
S_4 = *n*-Butanol–ethanol–water (40:11:19).
S_5 = Isopropanol–conc. ammonia–water (7:2:1).

Detection: D_1 = The chromatogram is sprayed with 0.1 *M* NaOH and viewed under ultraviolet light.
D_2 = The chromatogram is sprayed with a 5% ethanolic cobaltous nitrate solution, dried at 80° and exposed to ammonia vapours (blue spots of barbiturates).
D_3 = Sodium periodate and benzidine (for ribosides).

Paper electrophoresis

Paper: Whatman No. 1.
Potential: 30 V/cm.
Electrolyte: Borate buffer pH 7.15.
Detection: As above.

Compound	R_F					*Electrophoretic mobility in cm*
	S_1	S_2	S_3	S_4	S_5	
1-(β-D-Ribofuranosyl)-5,5-diethylbarbituric acid	0.35	0.77	0.79	0.80	0.85	0.51
1-(β-D-Ribofuranosyl)-5-ethyl-5-phenylbarbituric acid	0.35	0.79	0.82	0.81	0.91	0.50
1-Methyl-5,5-diethylbarbituric acid	0.79	0.93	0.90	0.92	0.91	0.22
1-Methyl-5-ethyl-5-phenylbarbituric acid	0.75	0.95	0.90	0.93	0.93	0.23

TABLE 77

PC R_F VALUES OF SOME 5-SUBSTITUTED 6-AZAURACIL DERIVATIVES

(M. BOBEK, J. FARKAŠ AND F. ŠORM, *Collection Czech. Chem. Commun.*, 32 (1967) 3577)

Paper: Whatman No. 1.
Solvent: Ethyl acetate–acetic acid–water (30:19:30).
Detection: Not stated.

Compound	R_F
5-(L-*xylo*-1,2,3,4-Tetrahydroxybutyl)-6-azauracil	0.28
5-(D-*ribo*-1,2,3,4-Tetrahydroxybutyl)-6-azauracil	0.28
6-(L-*xylo*-1,2,3,4-Tetrahydroxybutyl)-3-thioxo-2,3,4,5-tetrahydro-1,2,4-triazin-5-one	0.37
6-(D-*ribo*-1,2,3,4-Tetrahydroxybutyl)-3-thioxo-2,3,4,5-tetrahydro-1,2,4-triazin-5-one	0.37
6-(L-*xylo*-1,2,3,4-Tetrahydroxybutyl)-3-methylthio-2,5-dihydro-1,2,4-triazin-5-one	0.49
6-(D-*arabino*-1,2,3,4-Tetrahydroxybutyl)-3-methylthio-2,5-dihydro-1,2,4-triazin-5-one	0.50
5-(1,4-Anhydro-L-*lyxo*-1,2,3,4-tetrahydroxybutyl)-6-azauracil	0.42
5-(1,4-Anhydro-L-*xylo*-1,2,3,4-tetrahydroxybutyl)-6-azauracil	0.47
5-(1,4-Anhydro-D-*ribo*-1,2,3,4-tetrahydroxybutyl)-6-azauracil	0.42

3361-56-2 Q4